



PERLS Pilot Study Report

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Overview— The purpose of this pilot study was to investigate usability of the PERLS (PERvasive Learning System) app and its potential for micro-learning by exploring the nature of Flagship students' engagement with it, identifying the strengths and weaknesses of its content and technological features, and determining how the app can promote and sustain language learning for both pre- and post-Capstone Flagship students. The pilot study took place during a 2-week period (July 17-August 1, 2017). Participants were 11 pre-Capstone and one post-Capstone Chinese Flagship students who participated in two 30-minute semi-structured interviews conducted at the end of the first week (Round 1) and at the end of the second week of the pilot study (Round 2). Data obtained from 21 interviews (i.e., 12 interviews from Round 1 and nine interviews from Round 2) were summarily transcribed and qualitatively analyzed to identify emergent themes relevant to the purpose of the pilot study. Based on the analysis of the interview data, this report presents an executive summary of the main findings and offers recommendations for improving PERLS.

Keywords— mobile assisted language learning, microlearning, microcontent, Flagship capstone, Chinese

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MAIN FINDINGS

PERLS usage

Daily usage of the app varied from five minutes to one hour. While most participants reported using the app in smaller chunks of time (5–10 min.) every day or every other day, a couple of participants “binge used” the app to complete a large number of lessons at once. Overall, the app usage and enthusiasm slightly declined during the second week due to participants' busy schedules and the lack of content in the app (e.g., participants who completed all or most of the lessons during Week 1 had a limited amount of new content during Week 2 of the pilot study).

Perceptions of PERLS features and content

Altogether participants enjoyed using the app and praised its ease of access, navigation, and use. The estimated duration of each lesson was fairly accurate. Interestingly, many participants reported they would not be motivated to use the app if the estimated duration of each lesson exceeded 5–10 minutes. The complexity of the language input was appropriate for the majority of pre-Capstone participants and relatively easy for the post-Capstone participant. Overall, the difficulty level was challenging, but not too challenging to be discouraging. According to one participant, “It's easy enough that I wanna read it, but it's difficult enough that I'll still look up a few words.”

The lessons were described as interesting, short enough to maintain learners' attention, and relevant for Flagship students (e.g., the app is “a mini Flagship in your pocket”). While each of the four topic areas seemed to generate at least some interest, the most useful topic areas were Language Facts and Life Skills. Participants enjoyed content cards (because they provided concise, interesting, and useful information), external links to YouTube videos (because they were more interactive and provided listening practice), and quizzes (because they

helped learners check their understanding of the content and motivated them to pay closer attention).

Participants showed unanimous support for the use of micro-content in PERLS and described it as “awesome” and “fabulous.” Micro-content made their learning less intimidating and stressful because shorter texts were more manageable, required less cognitive effort to concentrate, and made it easy to digest and remember information. Some participants found micro-content conducive to skimming, whereas others thought it was more conducive to perusing. The use of micro-content encouraged participants to read more and promoted language learning “on the go” in informal settings (e.g., while waiting in line, eating, commuting by bus or metro, before going to bed, or after waking up).

All participants liked the idea of allowing user-contributed content in PERLS as long as it was moderated and vetted. Although the majority of participants also supported the idea of integrating PERLS in Flagship language courses and tutoring sessions, many of them did not have a clear vision of what such integration might entail. Two main ideas for integration were (a) using the app on a supplementary basis (e.g., as a source of topics for more in-depth discussions or as a “stepping stone” to encourage more reading), and (b) assigning Flagship students a task to create content that is pertinent to their majors (see Recommendations below).

Issues

During Week 1 of the pilot study, some participants experienced minor technical glitches (e.g., slow reaction time when tapping, broken links, etc.) and struggled initially with figuring out how to use PERLS. The following is a summary of the main issues reported by participants:

- Because the app relies on Wi-Fi, it cannot be used in

places without the Internet service.

- Topics listed on the “For You” page are not hyperlinked. Clicking on “courses” or “collections” in the app generates a blank list; only “topics” and “lessons” seem to work. The app supports only receptive skills (primarily reading) and has no audio content. External links to YouTube videos cannot be opened in China due to censorship.
- Opportunities for knowledge check are limited. Each lesson comes with only one multiple-choice question and some lessons do not have any questions whatsoever.
- There is no feedback in quizzes, so users do not know why their answers are right or wrong. Some quizzes are too cursory and contain options that are obvious distractors.
- To answer a multiple-choice question, a user must click on the text of an option rather than on the “circle” (radio button) in front of that option. There is no “submit” button, so if one of the options is selected by accident (e.g., during scrolling), it is automatically recorded as an answer.
- If a user clicks “Done” without selecting a specific option in a quiz, the quiz gets marked as completed. If a user does not answer a quiz question and goes back to the content, the app says that the lesson has been completed.
- There is no built-in dictionary or a mechanism to save new words for future review. Most participants had to use an external dictionary (such as Pleco or iOS dictionary) to look up new words. One participant also used Quizlet to keep track of new words.

RECOMMENDATIONS

1 Improving usability and efficacy

Orientation page:

- add a short tutorial for users who access the app for the first time;
- make the topics on the “For you” page clickable.

Content:

- develop more content that targets all four skills, not just reading;
- create different levels of content (e.g., a micro-content card with an optional link to additional resources for more in-depth learning);
- make the links more salient by changing the color of the underlined text;
- include a “Go back” feature that would allow users to go back and review the content before answering quiz questions;
- consider using (hash)tags for content so that it can be searched more easily;
- create the “New Lessons” tab/section to display new content.

Knowledge check:

- ensure that there is at least one quiz question for every

piece of new content;

- consider creating more than one quiz question for each piece of content;
- include other types of questions (e.g., fill-in-the-blanks).

2 Proposed new features

Listening:

- Enable audio/video; provide a text-to-speech feature so that users could not only read, but also listen to the texts (e.g., read with the Nanjing accent).

Speaking:

- Add a “Record audio” feature that would allow users to record themselves.

Writing:

- Add a feature that would allow users to practice writing characters.

Vocabulary:

- Integrate a dictionary (like Pleco) to look up new words directly in the app; allow users to save new words for future review and create flashcards (like in Quizlet).

Feedback:

- Add explanations/feedback on quiz questions (alternatively, link questions to the part of the content where the answers can be found); include a feature that would provide users with feedback on their speaking (especially their pronunciation and tones).

Notifications:

- Create a notification system that would send users reminders (e.g., a reminder to use the app on a regular basis).

Tracking and rewarding:

- Create a mechanism to keep track of individual students’ performance and progress (e.g., how many lessons the user completed, what is the overall percentage of correctly answered questions, etc.). Such mechanism can be designed as a reward system (e.g., an “achievement board” for each user) and can also be used to recognize users who contribute new content (e.g., by giving them points).

Social features:

- add a chat feature (synchronous) and/or a discussion board feature (asynchronous) so that users could connect with each other;
- integrate a “Comment” feature so that users could leave comments and post clarification/follow-up questions about the existing content;
- create a “Q&A section” for users to share (a) language-specific information (e.g., grammar, vocabulary), and (b) Capstone-related information (e.g., tips for preparing for the Capstone year, Capstone students’ experiences, etc.);
- add a voting mechanism that would allow users to rate the content (e.g., using thumbs up/thumbs down); most popular or highly rated lessons can be displayed first (e.g., in the “Recommended Lessons” section/tab);
- enable Flagship students to contribute new content

to PERLS as part of their class assignment (especially major-specific content); such user-contributed content must be moderated and vetted before it gets published in PERLS.

3 Potential topics for new content in PERLS

Culture and society:

- food (e.g., ordering food, names of dishes and their meaning, common menu items in Chinese restaurants);
- traveling in China;
- festivals, holidays, and music in China;
- social semantics (e.g., differences between emojis in China and in the US; culturally specific signs and things one can find in public places);
- social rules, situations, and etiquette (e.g., what behaviors are considered rude in Chinese culture);
- world news and/or local Chinese news from the Chinese perspective.

Technology and Internet:

- shopping (e.g., how to use WeChat for payments, how to buy online via Taobao);
- social media (e.g., alternatives to social media that are not accessible in China).

Professional/ academic skills:

- applying for a job in China, creating a resume, finding an internship, being a student in China, choosing

classes, interacting with Chinese students, etc.;

Language focus:

- additional grammar and vocabulary topics (e.g., differences between X and Y in Chinese; common errors made by English-speaking learners of Chinese);
- cheng-yus (idioms), preferably with pictures to facilitate memorization;
- useful words and phrases for everyday life;
- language-for-specific-purposes content pertinent to students' majors.

Capstone focus:

- information that will help students prepare for their Capstone experience;
- information about experiences of current and/or past Capstone students.

4 Potential technology to be used in conjunction with PERLS

- Pleco (dictionary)
- Quizlet (flashcards)
- WeChat (for synchronous communication with other Flagship students)
- Weibo, Gloss, and ChinesePod (as a source of topics/ texts/ audio content)

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